Canon

Mini DV

Precision-Engineered
Genuine Canon
Video Lens

ZR60
ZR65 MC
ZR70 MC

DIGITAL VIDEO CAMCORDER

Share All the Wonder and Excitement of Life

www.canondv.com

Mac

Designed for Microsoft® Windows® XP

All the Style...

Designed for point and shoot simplicity, Canon's new ZR70 MC /ZR65 MC /ZR60 camcorders allow everyone to great results without any effort at all. Place the camcorder in your hand, and it fits comfortably and securely, like you've owned it for years. No learning curve is necessary as soon find yourself shooting crisp, vibrant video and life-like digital photos, just by pressing a single button. Connect your camcorder to a computer running Windows or Mac Operating Systems, and experience the digital world like it was meant to be, quick, seamless, and fun. Canon, the trusted name in optics for decades, has made capturing memories more convenient, exciting, and easier than ever.

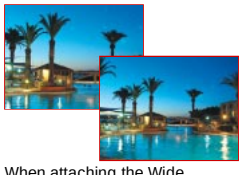
DV Format

MiniDV is the new preferred format for personal and broadcast-quality video, highly regarded for its high audio and image quality. With up to 540 lines of horizontal resolution and minimum color noise, MiniDV delivers a 20% clearer picture than analog camcorder formats. All this, in a handy, super-compact cassette.

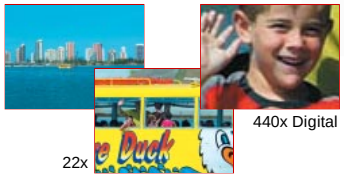
Mini DV Digital Video Cassette

22x Optical Zoom Lens (ZR70 MC)
20x Optical Zoom Lens (ZR65 MC)
18x Optical Zoom Lens (ZR60)

What sets a Canon camcorder apart from all the others? It's the only camcorder made by a company renowned for high-quality professional optics. Our vast expertise in designing and crafting precision lenses for 35mm and broadcast TV cameras also goes into every camcorder lens we make. The ZR70 MC, ZR65 MC and ZR60's optical zoom lens delivers superb definition and contrast, taking full advantage of the DV format. The digital zoom extends the camcorder's magnification revealing details too small to see with the naked eye. With the ZR70 MC, you can attach the supplied WA-30.5 Wide Attachment which decreases the focal length by a factor of 0.6, giving you a wide perspective for indoor shots or panoramic views.



When attaching the Wide Attachment 0.6x to the ZR70 MC



22x/440x
20x/400x
18x/360x
OPTICAL ZOOM / DIGITAL ZOOM

Image Stabilizer

A high quality image stabilization system corrects camcorder shake instantly, so your videos always look smooth, steady and natural even when shooting hand-held at full telephoto.

IMAGE STABILIZER

ZR65 MC

Program Auto Exposure

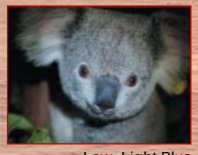
While the Easy Recording mode is fine for most shooting situations, the camcorder also includes additional pre-programmed auto exposure modes (Auto, Sports, Portrait, Spotlight, Sand & Snow, Low Light and Night mode), each carefully designed to give you the best possible image results under special shooting conditions. In situations normally too dark for recording, the camcorder uses the Night mode to select the ideal shutter speed and sensitivity combination to brighten up the scene, without sacrificing color.

Manual Controls

The fully-automatic ZR70 MC, ZR65 MC and ZR60 gives great results even in the hands of a novice, while experts will appreciate the manual focus, exposure, white balance and shutter speed controls.

Super Night Mode and Low Light Plus Mode (ZR70 MC only)

Even when the light has faded, you can keep on shooting with the ZR70 MC 's Super Night mode (in Camera mode) and Low Light Plus mode (in Card Camera mode). The assist lamp lights up to illuminate the subject allowing you to capture the action without turning the lights on.


Low Light Plus

Analog Line-In/Converter

You can send an analog video signal from a TV, VCR or a camcorder into the ZR70 MC, ZR65 MC or ZR60 and record it onto a DV tape, or convert the analog signal into digital signal, for direct transfer to digital video devices or computers equipped with a IEEE1394 terminal*.

*The Analog to Digital Converter may not function depending on the software used.

ANALOG▶DIGITAL CONVERTER

IEEE1394 DV Terminal

An IEEE1394-compliant DV terminal lets you connect the ZR70 MC, ZR65 MC or ZR60 to a DV-compatible computer or another Canon DV camcorder. Transfer your digital movies to your computer's hard disk, edit your scenes, then use them to create high-impact Web sites, video e-mail, interactive CDs and DVDs, or a personal video album.

Included Software

With **DV Messenger,** you can use your Canon camcorder for Internet Video Chat with Microsoft Windows Messenger through IEEE1394. Control the zoom and focus of your camcorder or the person you are chatting with. Preview thumbnails and transfer photos. Watch and control the video playback of either camcorder - all from your computer.

USB Terminal (ZR70 MC and ZR65 MC only)

Allows high-speed transfer of images from your SD Memory Card or MultiMediaCard to your computer. By using the USB cable and software provided, you can process and organize your images on your PC.

Included Software

The ZR70 MC /ZR65 MC /ZR60 Kit includes software for image management and editing: **ZoomBrowser EX** (Windows) and **ImageBrowser** (Macintosh) which let you easily download, browse, archive, and retouch your photos. Automatically resize images and attach them to e-mail, arrange them for printing, and add text.

All the Performance...

Video Mode

The ZR70 MC, ZR65 MC and ZR60 utilize high-precision optics, a premium image stabilization system, and the latest processing technology to deliver outstanding video in all situation.

Motion JPEG (ZR70 MC only)

The ZR70 MC lets you record short movie clips in Motion JPEG format onto the inserted memory card, for clear images and smooth playback. You may choose to record up to 10 seconds at 320 X 240 pixels or up to 30 seconds at 160 X 120 pixels.

Motion JPEG

XGA High Resolution Photos (ZR70 MC and ZR65 MC only)

The ZR70 MC and ZR65 MC camcorders capture beautiful high definition photos. Just press the photo button to capture stunning XGA (1024 x 768 pixel) images onto the included 8 MB SD Memory Card. For added flexibility, you can also select the compression size (Superfine/Fine/Normal).

XGA High Resolution Photos

Advanced Dual Image Signal Processing

Canon technology allows you to capture perfect video and the perfect photo. Since video and printed photos have different needs why should they be treated the same? The camcorder uses two different processing techniques to maximize quality for display on a TV or for printing.

SD Memory Card and MultiMediaCard (ZR70 MC and ZR65 MC only)

The ZR70 MC and ZR65 MC expands video possibilities with a built-in slot for an SD (Secure Digital) Memory Card or a MultiMediaCard, in addition to a MiniDV cassette. With the ZR70 MC, you can also capture small movie clips to the memory card in Motion JPEG format. Easily transfer images to your PC directly from the camcorder using USB and IEEE1394. Produce effects not possible with just a cassette using the Card Mix Effects. Choose one of the sample images provided on the supplied SD Memory Card (such as picture frames, backgrounds and animations) and combine it with the live video recording.

SD MultiMediaCard

Digital Photo Mode

For added flexibility, you may take up to 700 still images on a MiniDV single tape (in SP Mode). The camcorder records the photos for approximately 6 seconds, as well as recording the sound for your verbal notes or narration. You can search through the recorded tape for your photos using the supplied remote control.

Direct Print with Canon Bubble Jet Printers (ZR70 MC and ZR65 MC only)

Print directly from your camcorder to select Canon Bubble Jet Printers. A single USB cable connects the printer to the ZR70 MC or ZR65 MC and all printing options can be controlled from the camcorder's menu. Options include: selecting the print quantity and whether you would like bordered or borderless prints.

BUBBLE JET DIRECT

Exif Print (ZR70 MC and ZR65 MC only)

The ZR70 MC and ZR65 MC support Exif Print (2.2), a worldwide standard that enhances communication between digital cameras and printers. At the time of shooting, vital camcorder settings and scene data are recorded with the image, resulting in realistic and reliable color reproduction. Poor lighting or mistakes can also be corrected, allowing photos to be even better than the originals.

Exif Print

Flexible LCD View Screen and Color Viewfinder

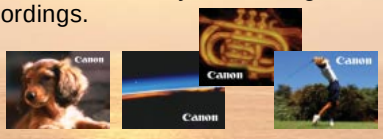
The bright 2.5” LCD view screen makes it easy to compose sensational shots without having to squint into the viewfinder. You can rotate the screen for high-or low-angle shots, or turn it around 180° to record yourself. When you’re done shooting, the screen is perfect for reviewing your scenes.

2.5" (6.4cm) LCD

All the Simplicity

My Camera Function

Personalize your camcorder by customizing the start-up image and camcorder operation sounds. With the ZR70 MC and ZR65 MC, you can choose a start-up image from the included software CD or use your own digital recordings.



PCM Digital Sound

PCM STEREO

The ZR70 MC, ZR65 MC and ZR60 offer two digital audio modes, 12 and 16-bit. You can select 16-bit mode for high-quality, CD-equivalent stereo sound, or 12-bit to record only two of four channels, leaving two channels free for you to record additional sound later.

StitchAssist (ZR70 MC and ZR65 MC only)

By using the StitchAssist Mode, you can create magnificent panoramas. Shoot your landscape, and transfer them to your computer. Then simply select and arrange your images in the correct order, and the supplied PhotoStitch software does the rest, aligning, overlapping and cropping the separate images to form one ultra-wide panoramic still image.

Advanced Accessory Shoe (ZR70 MC only)

Want to add an accessory microphone or video light? Simply slide Canon's DM-50 Directional Stereo Microphone or VL-3 Video Light into the accessory shoe; the camcorder will automatically provide power and connections. No external power or cables are required.

Digital Effects

Show your creativity by using the special effects and digital faders available with the ZR70 MC, ZR65 MC and ZR60. A wide selection of faders and special effects will add visual appeal and greater imaging variety.

Faders

Add a variety of transitions to your movies with a fade to or from black. Choose from Fade Trigger, Wipe, Corner, Jump, Flip, Puzzle, Zigzag, Beam and Tide.

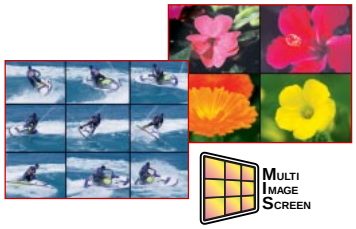
Special Effects

For a more creative look, you can switch on the following digital effects during recording or playback: Art, Black & White, Sepia, Mosaic, Ball, Cube, Wave, Color Mask or Mirror.

* In Card mode: Only black and white is available.

Multi-image Screen

Divide your screen into four, nine or sixteen pictures with the Image Capture function. You can choose the speed at which the images are captured: Manual, Slow, Moderate or Fast.



Selectable Color Light-up Buttons (ZR70 MC only)

To make the ZR70 MC easier to use in dark surroundings, the VCR playback buttons can be illuminated in any one of the six colors: turquoise, blue, green, yellow, violet, and orange. Press one of the buttons and they simultaneously change color. You can also select to turn them off, or set them to light up only when a button is pressed.

- Lithium Ion Battery
- Microphone Terminal
- Built-in Speaker
- Photo Search/Date Search
- Time Code/Data Code
- Superb Playback Function
- S-Video Input/Output
- Self-Timer
- Confirmation Beep
- Zero Set Memory
- World Clock
- 16:9 Wide Screen Mode
- AV Insert and Audio Dubbing
- Remote Control
- Record Search & Review

Pictures simulated

Optional Accessories

Lithium Ion Battery Packs

Extra batteries for use with the camcorders.

Battery pack	Maximum recording time	
	using viewfinder	using LCD screen
BP-508 (single-capacity) (ZR65 MC /ZR60: supplied)	1 hr. 40 min.	1 hr. 15 min.
BP-512 (single-capacity) (ZR70 MC : supplied, ZR65 MC /ZR60: optional)	3 hr.	2 hr. 20 min.
BP-511 (single-capacity) (optional)	3 hr.	2 hr. 20 min.
BP-522 (double-capacity) (optional)	6 hr. 10 min.	4 hr. 55 min.
BP-535 (triple-capacity) (optional)	9 hr. 50 min.	7 hr. 50 min.

CG-570 Battery Charger

The battery charger can be used with the supplied CA-570 Compact Power Adapter or the optional CB-570 Car Battery Cable to charge BP-500 series battery packs.

CB-570 Car Battery Cable

Use the car battery cable with the CG-570 Battery Charger to charge battery packs on the move. Cannot be used to power camcorder directly.

VL-3 Video Light

(ZR70 MC only)

This 3W light attaches to the shoe for cable-free operation. Continuous on and auto on/off settings. Powered by the camcorder's power source.

DM-50 Directional Stereo Microphone

(ZR70 MC only)

Attaches to the shoe for cable-free operation. Picks up shotgun or shotgun + surrounding sound. Powered by the camcorder's power source. Wind shields included.

TL-30.5 Tele-converter

Increases focal length by 1.9x. Image resolution may be lower when the zoom is at the tele-angle position with TL-30.5.

WD-30.5 Wide-converter

Gives wide-angle coverage at 0.7x.

VL-10Li Battery Video Light

Powerful 10 W illumination. A BP-900 series battery attaches directly, so operation is cable-free.

FS-30.5U Filter Set

Includes neutral density (ND 8) filter and MC protector.

WS-20 Wrist Strap

SC-1000 Soft Carrying Case

SC-A50 Soft Carrying Case

Genuine Leather

DVM-E60/DVM-E80 Digital Video Cassette

DVM-CL Digital Video Head Cleaning Cassette

This mark identifies genuine Canon video accessories. When you use Canon video equipment, we recommend Canon-brand accessories or products bearing the same mark.

Availability differs from area to area.

Specifications

Power supply (rated)	7.4 V DC (Battery), 8.4 V DC (DC IN)
Power consumption	Using viewfinder: 2.9 W Using LCD screen: 3.8 W
Television system	EIA standard (525 lines, 60 fields) NTSC color signal
Video recording system	2 rotary heads, helical scanning system DV system (Consumer digital VCR SD system) Digital component recording.
Audio recording system	PCM digital sound: 16 bit (48kHz/2ch), 12 bit (32kHz/4ch)
Image sensor	1/6" CCD (charge coupled device) approx. 680,000 pixels (effective pixels: tape: approx. 340,000 pixels, card: approx. 447,000 pixels)
Tape format	Videocassettes bearing the (MiniDV) mark
Tape speed	SP: 0.74 ips (18.81 mm/s); LP: 0.49 ips (12.56 mm/s)
Maximum recording time (with an 80 min. cassette)	SP: 80 min., LP: 120 min.
Fast forward/rewind time	2 min. 20 sec. (with a 60 min. cassette)
Lens	ZR70 MC : F1.6-3.6, 22x power zoom, f=2.8-61.6 mm ZR65 MC : F1.6-3.2, 20x power zoom, f=2.8-56 mm ZR60: F1.6-2.9, 18x power zoom, f=2.8-50.4 mm
Focusing system	TTL autofocus, manual focusing possible
Minimum focusing distance	3.3 ft. (1 m), 0.39 in. (1 cm) on maximum wide angle
Maximum shutter speed	1/2,000 (ZR70 MC /ZR65 MC : 1/250 when using a memory card)
Minimum illumination	1.6 lx using the Night mode during tape recording
Recommended illumination	More than 100 lx
Filter diameter	30.5 mm
Viewfinder	0.33 inch, color LCD (approx.113,000 pixels)
LCD screen	2.5 in measured diagonally (approx. 112,000 pixels)
Microphone	Stereo electret condenser microphone
DV terminal input/output	Special 4 pin connector (based on IEEE1394)
Video terminal	1 Vp-p/75 ohms unbalanced
S-video terminal	1 Vp-p (Y signal), 0.286 Vp-p (C signal)
Audio terminal	Input level: -10 dBV/at least 40 kohms, unbalanced; Output level: -10 dBV (47 kohms load), less than 3 kohms, unbalanced
Operating temperature range	32 - 104° F (0 - 40° C)
Dimensions	4.1 x 2.3 x 5.8 in. (103 x 58 x 147 mm)
Weight	ZR70 MC : 1.2 lb (525 g) ZR65 MC /ZR60: 1.2 lb (520 g)

ZR70 MC and ZR65 MC only

Recording media	SD Memory Card, MultiMediaCard
Number of recording pixels	Still image: 1024 x 768 pixels, 640 x 480 pixels Movie: 320 x 240 pixels (approx. 10 sec.)*, 160 x 120 pixels (approx. 30 sec.)* *The figures in brackets represent the maximum length of one movie clip.
File format	Design rule for Camera File system (DCF), Exif 2.2 compliant, Digital Print Order Format (DPOF) compliant (only images marked for printing)
Image format	Still image: JPEG (compression mode: Superfine/Fine/Normal) Movie: Motion JPEG
Estimated SD Memory Card SDC-8M capacities*	1024 x 768: Superfine 14 images/Fine 20 images/Normal 39 images, 640 x 480: Superfine 35 images/Fine 52 images/Normal 86 images *The actual number varies depending on the images. Sample images recorded on the supplied SD Memory Card are to be included in the total number.
USB terminal	mini-B (USB 2.0 compliant)

System requirements for supplied software:

DIGITAL VIDEO SOLUTION DISK (ZR70 MC /ZR65 MC)

Interface: USB: only preinstalled Windows 98/Windows Me/Windows 2000/ Windows XP systems with built-in USB ports, or only systems equipped with genuine Apple-brand built-in USB interfaces.

Operating System		CPU	RAM
Windows	Windows 98/ Windows Me/ Windows 2000	150MHz or better	64MB or more
	Windows XP	300MHz or better	128MB or more
Macintosh	Mac OS 9.0–9.2	PowerPC	20MB or more
	Mac OS X (10.1/10.2)	PowerPC	128MB or more

Free hard disk space		
Windows	ZoomBrowser EX	120MB or more
	PhotoStitch	40MB or more
	Canon Camera TWAIN Driver	25MB or more
	Canon Camera WIA Driver	25MB or more
Macintosh	ImageBrowser	50MB or more
	PhotoStitch	30MB or more

DV NETWORK SOLUTION DISK

Interface: IEEE1394: only preinstalled Windows XP Home Edition or Windows XP Professional systems with built-in IEEE1394 terminal

CPU	500 MHz or better (800 MHz or better recommended)	
RAM	128 MB or more (256 MB or more recommended)	
Free Hard Disk Space	AV/C Camera Storage Subunit-WIA Driver	1 MB or more
	DV Messenger	100 MB or more
Other	Windows Messenger Version 4.5 or higher	

- To use DV Messenger, it is required that Windows Messenger 4.5 or higher operates correctly.
- It is required that Windows Messenger operates and the videoconference function can be used with a digital camcorder . Please consult Microsoft for details.
- If you are using a router, make sure it is an UPnP (Universal Plug and Play) compatible router. For details, consult your Internet service provider, telephone carrier, or refer to the manual of the router.
- We recommend using a broadband Internet connection.
- The communication quality and connectivity depend on the congestion of the Internet line and service.
- This product does not guarantee a certain communication quality.

THE CANON ZR70 MC /ZR65 MC /ZR60 KIT

- ZR70 MC , ZR65 MC or ZR60
- BP-512 Battery Pack (ZR70 MC)
  BP-508 Battery Pack (ZR65 MC /ZR60)
- CA-570 Compact Power Adapter
- WL-D79 Wireless Controller (ZR70 MC /ZR65 MC)
  WL-D80 Wireless Controller (ZR60)
- SS-800 Shoulder Strap
- STV-250N Stereo Video Cable
- IFC-300PCU USB Cable (ZR70 MC /ZR65 MC)
- WA-30.5 Wide Attachment (ZR70 MC)
- SDC-8M SD Memory Card (ZR70 MC /ZR65 MC)
- DIGITAL VIDEO SOLUTION DISK (ZR70 MC /ZR65 MC)
- DV NETWORK SOLUTION DISK

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